

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A variable gain amplification circuit comprising:

a signal generator having an output terminal;

a variable capacitor connected to said output terminal; and

a control circuit operable to control an output amplitude of said signal generator and a capacitance of said variable capacitor,

wherein said control circuit controls said variable capacitor so that a cutoff frequency or a resonance frequency of said signal generator becomes constant.

2. (Previously Presented) A variable gain amplification circuit as defined in Claim 1, wherein said signal generator includes a variable resistor at an output load part thereof.

3. (Previously Presented) A variable gain amplification circuit as defined in Claim 1, wherein said signal generator includes a variable inductor at an output load part thereof.

4. (Previously Presented) A variable gain amplification circuit as defined in Claim 1, wherein said signal generator comprises:

a variable gain mixer having a first input terminal and a second input terminal;

an RF signal source connected to said first input terminal of said variable gain mixer; and

an LO signal source connected to said second input terminal of said variable gain mixer.

5. (Previously Presented) A variable gain amplification circuit as defined in Claim 1, wherein said signal generator comprises:

a variable gain amplifier having a first input terminal; and

an RF signal source connected to the first input terminal of the variable gain amplifier.

6. (Original) A variable gain amplification circuit as defined in Claim 4, wherein said variable gain mixer is a single balanced mixer or a double balanced mixer.

7. (Original) A variable gain amplification circuit as defined in Claim 5, wherein said variable gain amplifier is a source grounded amplifier.

8. (Previously Presented) A variable gain amplification circuit as defined in Claim 1, wherein said variable capacitor includes a circuit comprising at least two capacitors placed in parallel, and at least one switch connected to an end of one of said at least two capacitors; and

wherein the capacitance of said variable capacitor is varied by ON/OFF of said at least one switch.

9. (Previously Presented) A variable gain amplification circuit as defined in Claim 1, wherein said variable capacitor includes a capacitor and a MOS device whose gate terminal is connected to said capacitor; and

wherein the capacitance of said variable capacitor is varied by a bias voltage supplied to said gate terminal of said MOS device.

10. (Previously Presented) A variable gain amplification circuit as defined in Claim 2, wherein said variable resistor includes a circuit comprising at least two resistors placed in parallel, and at least one switch connected to an end of one of said at least two resistors; and wherein the resistance of said variable resistor is varied by ON/OFF of said at least one switch.

11. (Previously Presented) A variable gain amplification circuit as defined in Claim 3, wherein said variable inductor is constituted by a circuit comprising at least two inductors placed in parallel, and at least one switch connected to an end of one of said at least two inductors; and wherein the inductance of said variable inductor is varied by ON/OFF of said at least one switch.

12. (Canceled)

13. (Previously Presented) A variable gain amplification circuit as defined in Claim 4, wherein said RF signal source has a signal band equal to or larger than 100MHz.

14. (Original) A variable gain amplification circuit as defined in Claim 4, wherein said variable gain mixer is a down conversion mixer.

15. (Previously Presented) A variable gain amplification circuit as defined in Claim 5, wherein said RF signal source has a signal band equal to or larger than 100MHz.